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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,685	04/17/2001	Jefferson E. Odhner	LUC 2-026-3	7184

7590 07/16/2004

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/836,685

Applicant(s)

ODHNER ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 17 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 17 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Response to Arguments***

1. The Applicants argue that, with respect to Claims 1, 17, and 32, the combined teachings of Asakura, Kompfner, and Essemli et al. fail to teach or reasonably suggest a system and method for treating optical signals from a source, including a movable diffractive optical element having a surface carrying a holographic diffraction grating including an array of facets, each of the facets carrying a diffraction grating which are superimposed, each being angularly offset with respect to each other. The Examiner respectfully disagrees. As noted in Section 6 of the Office Action dated 10/28/03, Asakura discloses all of the structural features of the claimed invention, including a source (See Figures 7-8 of Asakura), a movable diffractive optical element (See 92 in Figure 8 of Asakura), and output stations (See 98, 99 in Figure 8 of Asakura). However, as also noted in the previous Office Action, the diffractive optical element of Asakura is not a holographic diffraction grating including an array of facets, each of the facets carrying a diffraction grating which are superimposed, each being angularly offset with respect to each other. Kompfner and Essemli et al. are being relied upon to provide the additional teachings of utilizing a movable diffractive optical element that has a surface carrying a holographic diffraction grating including an array of facets, each of the facets carrying a diffraction grating which are superimposed, each being angularly offset with respect to each other. It is noted that the optical systems of both Kompfner and Essemli et al. perform similar functions to that of

Asakura, in that all three optically route light through their respective optical systems through the use of a diffractive optical element (See 92 of Figure 8 of Asakura; 11a of Figure 1b of Kompfner; 6, 8, 17, 18 in Figures 1-2 of Essemli et al.). Instead of using a conventional diffraction grating, i.e. one with ruled lines, as in Asakura, Kompfner teaches the use of holographic gratings formed by interferometric techniques. Additionally, Kompfner additionally teaches the use of a series of overlapping holographic gratings to divert light of a particular orientation to a particular output station (See col. 3, line 42-col. 4, line 20). Finally, Essemli et al. teaches that the plate (See for example 6 in Figures 1-2), and hence the holographic gratings disposed on the plate, may be moved to provide additional deflection of the incident light beam such that selective transmission of the light beam to the desired output station is achieved. With regard to the argument that modifying the system of Asakura to achieve the claimed invention by eliminating an element, the Examiner notes that only the movable diffractive optical element is being substituted by those taught by Kompfner and Essemli et al. (i.e. using a holographic grating as opposed to a ruled diffraction grating to optically route light by diffraction). Further, with respect to arguments regarding the holographic diffraction grating having stacked or superimposed diffraction gratings, Kompfner specifically discloses such diffraction gratings.

2. Claims 1, 3, 17, and 32 are rejected as follows.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 17, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura (U.S. Patent No. 5450512), of record, in view of Kompfner (U.S. Patent No. 4337993), of record, and Essemli et al. (FR2538131 A1), of record.

See Section 6 of the Office Action dated 10/28/03.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura in view of Kompfner and Essemli et al. as applied to Claim 1 above, and further in view of Mey et al. (U.S. Patent No. 5608278), of record.

See Section 7 of the Office Action dated 10/28/03.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


Art Unit: 2872

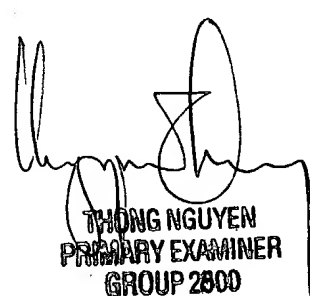
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Arnel C. Lavarias  
7/12/04

  
THONG NGUYEN  
PRIMARY EXAMINER  
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